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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,996

09/13/2005

Dirk Schroeter

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EXAMINER

LAWRENCE JR, FRANK M

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,996	Applicant(s) SCHROETER, DIRK	
	Examiner Frank M. Lawrence	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/4/05, 9/13/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 1 of each of claims 17-19, it is unclear what is meant by “at least one of regeneration of the filter system” because the regeneration is a single entity.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 20, 24-26 and 32-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Dallas et al. (6,432,177).
5. Dallas et al. '177 teach an inlet feed filter system for an automobile fuel cell, comprising a filter unit containing a particulate filter (140) upstream of a chemical filter (150) (see figures, col. 9, line 53 to col. 10, line 13). The limitations to the regeneration of the filter do not limit the

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claimed structure in a way that distinguishes over the prior patent because the prior filters are capable of being regenerated using monitoring and actuating elements.

6. Claims 20, 24-26, 30 and 32-36 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese reference (JP 60-054177 A).

7. JP '177 teaches an inlet feed filter system for a portable fuel cell, comprising a filter unit (20) containing a particulate filter upstream of a chemical filter and a blower (3) (see figures, abstract). The limitations to the regeneration of the filter do not limit the claimed structure in a way that distinguishes over the prior patent because the prior filters are capable of being regenerated using monitoring and actuating elements.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Dallas et al. '177 or JP '177 in view of Pratt et al. (6,689,194).

10. Any one of Dallas et al. '177 or JP '177 discloses all of the limitations of the claim except that filter performance is monitored and a message is generated. Pratt et al. '194 disclose a filter for a fuel cell intake comprising an adsorbent getter element (20), an impurity sensor downstream of the getter, and a visual indicator (24) for showing that the getter needs replacing (see figure, col. 3, lines 13-44). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system of any one of the primary references by

using a downstream monitor and indicator in order to provide a means for protecting the fuel cell from contamination with the adsorbent is spent or exhausted.

11. Claims 14-19, 21, 23, 27-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Dallas et al. '177 or JP '177 in view of Pratt et al. '194 as applied to claims 13 and 20 above, and further in view of Casey (4,898,601).

12. The primary and secondary references disclose all of the limitations of the claims except that a pressure drop is monitored and the filter is regenerated using a control unit and actuator when the fuel cell is inoperative. Casey '601 discloses a gas particulate filter (17) with a pressure drop monitoring system that actuates backwashing when the pressure drop exceeds an acceptable level (see figure 1, col. 2, line 58 to col. 3, line 3). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system of the primary and secondary references by using a pressure drop monitor that activates filter regeneration in order to provide a means for cleaning the particulate filter when its performance has been diminished from clogging. One having ordinary skill in the art would also understand that regeneration must take place when the fuel cell is inoperative when only one filter unit is used, or that the fuel cell may be kept on-line with alternating parallel filters.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references listed on the attached PTO-892 form disclose fuel cell filters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Frank M. Lawrence/
Primary Examiner, Art Unit 1797

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